

## H<sub>2</sub> and HD Line Emission from Pop. III Star Formation

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We investigate the H<sub>2</sub> and HD line radiation emitted in the formation process of metal-free stars. We show that the maximum luminosity is attained in the accretion phase for strong emission lines. In the accretion phase, rovibrational line emission becomes prominent, contrary to the runaway collapse phase, where the pure-rotational lines are always dominant. We also estimate the detectability of these lines by future far infrared telescopes, such as SPICA.